

REMARKS

Upon entry of the foregoing amendment, claims 1-33 are pending and remain in the application. The amendment to the claims do not present any new matter. Claim 1 has been rewritten to recite a specific concentration range of branching monomer residues. Support for this change may be found in claim 6 as originally filed. Accordingly, claim 6 has been rewritten to delete the concentration range of branching monomer and to avoid redundancy with claim 1. In accordance with the Examiner's suggestion, Claim 33 has been rewritten to place the claim in proper multiple dependent claim form. Applicants also wish to thank Examiner Boykin for providing an English translation of Japanese Patent Application No. 1138260 referred to in the Office Action.

Double Patenting Rejection

Claims 1-4, 9, and 12 have been rejected under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over claims 1-4 and 7-20 of U.S. Patent No. 6,551,688. Applicants respectfully traverse the rejection. Although Applicants disagree with the Examiner's rejection, a Terminal Disclaimer in compliance 37 C.F.R. §1.321(c) is submitted herewith to advance the prosecution of the application. The rejection has thus been overcome and should be withdrawn.

Rejection of Claims 1-15, 17-28, and 32-33 under 35 U.S.C. §102(b)

Claims 1-15, 17-28, and 32-33 are rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent No. 6,068,910 to Flynn et al. ("Flynn"). Applicants respectfully traverse the rejection and the statements made in support thereof.

A proper rejection under 35 U.S.C. §102(b) requires that every element of the claim be found "in a single prior art reference." See *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). "To anticipate, every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim." See *Brown vs. 3M*, 265 F.3d 1349, 60 USPQ2d 1375 (Fed. Cir. 2001). Further, "an anticipating reference must describe the [claimed] subject matter with sufficient clarity and detail to

establish that the subject matter existed and that its existence was recognized by persons of ordinary skill in the field of the invention." See *ATD Corp. vs. Lydall, Inc.* 159 F.3d 534, 545 ((Fed. Cir. 1998) (citing in *In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990)). Applicants respectfully submit that the cited reference, Flynn, both fails to disclose the specific elements of Applicants invention arranged as claimed and does not describe the claimed subject matter with sufficient clarity to be recognized by a person of ordinary skill in the art.

The anticipation rejection is grounded on the individual disclosures of Flynn regarding the calendering of polyesters having a crystallization ½ time of at least 5 minutes in the presence of an additive effective to prevent sticking of the polyester to the calendering rolls. Flynn also states, separately, that the polyester may have an preferred inherent viscosity ranging from about 0.6 to about 1.2 dL/g (col. 3, lines 62-67) and that about 0.1 to about 2.0 mole% of a branching agent may be added to polyester to improve melt strength and melt viscosity.

Each of these disclosures, however, are broad, taught generally, and are not arranged or connected with each other in a rational way that would teach Applicants' invention as claimed. For example, Flynn makes no mention of combining specific amounts of a branching agent with a polyester having the specific IV range as claimed in the instant invention. Flynn, in fact, provides no specific examples of a calendered polyester combined with a branching monomer at any level. Further, the disclosure of Flynn is completely silent on any benefits of the present invention such as, for example, higher calendering speeds, less roll resistance, reduced melt fracture, and lower bearing pressures. In view of these deficiencies, Applicants respectfully submit that there is simply no disclosure of Applicants' invention in Flynn nor any suggestion of the combination of elements as delineated in the claims.

Also, Flynn is not a proper anticipating reference because it does not describe the claimed invention with sufficient clarity to demonstrate possession of the invention to the extent that one of ordinary skill in the art would have recognized its existence.

Again, Flynn is directed to a general disclosure of polyester compositions for calendering and does not provide any embodiment in which all of the elements of the claimed invention are described together or related to each other. As stated in the MPEP (§2131.03), "When the prior art discloses a range which touches, overlaps or is within the claimed range, but no specific examples falling within the claimed range are disclosed, a case by case determination must be made as to anticipation. In order to anticipate the claims, the claimed subject matter must be disclosed in the reference with sufficient specificity to constitute an anticipation under the statute." In the absence of Applicants' own disclosure, there is nothing in Flynn that would have guided the skilled person to select a branching monomer in combination with a polyester having the desired IV range with sufficient specificity to make the claimed invention.

In view of current amendment and for the above reasons, Applicants respectfully submit that the disclosure of Flynn does not anticipate the claimed invention. Applicants request, therefore, that the rejection be withdrawn.

Rejection of Claims 16 and 29 under 35 U.S.C. §103(a)

The Examiner has rejected claims 16 and 29 under 35 U.S.C. §103(a) over the disclosure of U.S. Patent No. 6,068,910 to Flynn et al. ("Flynn") in view of Japan Patent Application No. 1138260, assigned to Mitsui ("Mitsui"). Applicants respectfully traverse the rejection and the statements made in support thereof. Applicants also wish to point out that, other than Japan Patent Application No. 1138260, the Office Action only refers to "the reference" in the rejection (see page 6, paragraph 2 of the Office Action). In the following arguments, therefore, Applicants have assumed that Flynn is the reference to which the Office Action refers.

As the Examiner is aware, to establish a *prima facie* case of obviousness, the cited art must suggest to the skilled artisan both the combination or modification alleged to be obvious and that the combination or modification would have a reasonable likelihood of success. See *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991). The cited art also must teach or suggest all of the claim limitations. See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Here the cited references, considered either individually

or in any reasonable combination, neither would have taught or suggested the claimed invention nor would have provided the requisite motivation to combine references.

The shortcomings of the Flynn in anticipating claims 1-15, 17-28, and 32-33 are set forth above and hereby incorporated by reference. As noted above, Flynn would not have taught the limitations of the polyester composition as presently claimed. Further, Flynn would not have suggested the use of diethylene glycol dibenzoate as a plasticizer.

The disclosure of Mitsui fails to remedy the shortcomings of Flynn. Mitsui describes a polyester composition comprising a thermoplastic polyester resin, a polar group-containing polyolefin, an amine, and a metal salt of an organic acid. A list of plasticizers, which includes diethylene glycol dibenzoate, also is disclosed (Applicants assume that the term "diethyl glycol dibenzoate", as given in the translated patent application, is a translation error and was intended to mean "diethylene glycol dibenzoate"). The compositions disclosed by Mitsui are intended for molding applications and, thus, are directed to an entirely different use than the compositions of the present invention. Mitsui makes no mention of calendering and, in fact, is entirely silent on any film-forming process. Mitsui also fails to disclose a polyester composition with a crystallization $\frac{1}{2}$ time of at least 5 minutes and having an inherent IV between 0.55 and 0.75 dL/g and makes no suggestion of combining such a polyester in combination with a release agent and a branching monomer. With these deficiencies, the combination of Flynn and Mitsui would not have taught the claimed invention.

Applicants' respectfully submit that the stated rejection fails to establish a *prima facie* case of obviousness. First, as noted above, the cited art, either alone or in any reasonable combination, would not have taught a polyester composition comprising a polyester with a crystallization $\frac{1}{2}$ time of at least 5 minutes and an inherent viscosity of about 0.55 to about 0.75 dL/g, a branching monomer, and a release agent. Second, the Examiner does not show from the cited art a proper suggestion or motivation to combine references. The "showing of a suggestion, teaching, or motivation to combine prior teachings "must be clear and particular...Broad conclusory statements regarding the teaching of multiple references standing alone, are not 'evidence'". See *In re*

Dembiczak, 175 F.ed 994, 50 USPQ2d 1614 (Fed. Cir. 1999). Further, there must be a "rational connection between the facts found and the choice made." See *In re Lee* 61 U.S.P.Q. 2d 1430 (Fed. Cir. 2002). Here there is no such rational connection between that which is taught in the cited references and the limitations of the presently claimed invention. The Office Action asserts that "such plasticizer is disclosed as displaying superior characteristics for the polyester polymer as made." Applicants have not been able to find any disclosure in *Mitsui* that indicates superior performance of diethylene glycol dibenzoate as a plasticizer in polyesters. It is Applicants' respectful submission, however, that such a statement, whether it exists or not, would not have pointed the skilled person to calendering applications but, instead, would have directed that person to compositions for molding. The skilled artisan, on reading *Flynn*, simply would not have looked to *Mitsui*, a reference which never mentions calendering or film forming processes, for guidance on plasticizers. Similarly, *Mitsui* provides no motivation for the skilled person seek out the disclosure of *Flynn*. Thus, the cited references could not have motivated a person skilled in the art at the time the invention was made to look to the cited sources of information, to select particular elements, and to combine them to obtain Applicants' claimed process.

Finally, because of the lack of a suggestion or teaching of Applicants' process as claimed, the cited art necessarily could not have provided a reasonable expectation of success. Applicants, therefore, respectfully request reconsideration and withdrawal of the rejection.

Rejection of Claims 30 and 31 under 35 U.S.C. §103(a)

The Examiner has rejected claims 30 and 31 under 35 U.S.C. §103(a) over the disclosure of U.S. Patent No. 6,068,910 to *Flynn* et al. ("Flynn") in view of U.S. Patent No. 5,679,288 to *Kim* et al. ("Kim"). As noted above, the Office Action did not unambiguously cite *Flynn* as a reference in the rejection; however, Applicants have assumed that *Flynn* is the reference to which the Office Action refers and, thus, traverse the rejection and the statements made in support thereof under that assumption.

The shortcomings of the Flynn in anticipating claims 1-15, 17-28, and 32-33 are set forth above and hereby incorporated by reference. Again, as described above, Flynn would not have taught the limitations of the polyester process as presently claimed. Further, Flynn does not suggest the use of esters of phosphoric acid, in particular, resorcinol bis(diphenyl phosphate) ("RDP"), as flame retardants.

The disclosure of Kim does not cure the deficiencies of Flynn. Kim discloses a blend of a predominant amount of a polyphosphate flame retardant and an effective amount of a liquid crystalline additive for viscosity reduction and compatibilization when blended with a thermoplastic polymer. Kim does not teach or suggest Applicants' calendering process and differs from the claimed invention in several important ways. To begin with, Kim is absolutely silent about calendering of polyesters and, in fact, does not describe any type of film forming process. Further, Kim does not disclose a polyester composition comprising a polyester having a crystallization ½ time of at least 5 minutes. Rather the polyesters noted in Kim, PET and PBT, are both highly crystalline, homopolymers, and would be well recognized by persons of ordinary skill in the art to have crystallization ½ times less than 5 minutes (see, for example, Dangseeyun et al., *Thermochim. Acta* 409 (2004) 63-77). Kim also discloses that polyphosphates such as, for example, resorcinol bis(diphenyl phosphate), have limited use in thermoplastic polyesters when used in the absence of liquid crystalline additives "due to incompatibility with matrix polymers and exudation during melt blending processes" (see col. 1, lines 41-43). In fact, this incompatibility is illustrated in Examples 4-8 where blends of PBT and RDP are disclosed as having "a somewhat irregular morphology with rather large agglomerates suggesting a second globular phase." (see col 6, lines 27-29). Thus, based on the disclosure of Kim, it would be entirely reasonable for the skilled person to conclude that RDP, in the absence of an LCP, would not be compatible with polyesters. Thus, Kim would not have directed a person of ordinary skill in the art toward the claimed invention but distinctly away.

Applicants' believe that the stated rejection does not establish a *prima facie* case of obviousness. First, there is nothing within the cited documents to show a proper suggestion or motivation to combine references. Second, even if combined, the

disclosures of Flynn and Kim would not have disclosed or suggested Applicants' process. Moreover, the disclosure of Kim has nothing to do with calendering and, in fact, teaches away from the aspect of the claimed process that the Examiner alleges to be obvious. Finally, the combination of Flynn and Kim would not have provided a clear guidance to a skilled person to select elements from these disclosures to make the present invention process with any reasonable expectation of success.

In view of the foregoing amendment and remarks, Applicants believe the application to be in condition for allowance. Accordingly, the Examiner is respectfully requested to reconsider the rejection, enter the above amendment, remove all rejections, and pass the application to issuance.

Respectfully submitted,

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February 8, 2005

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2/8/05

Date